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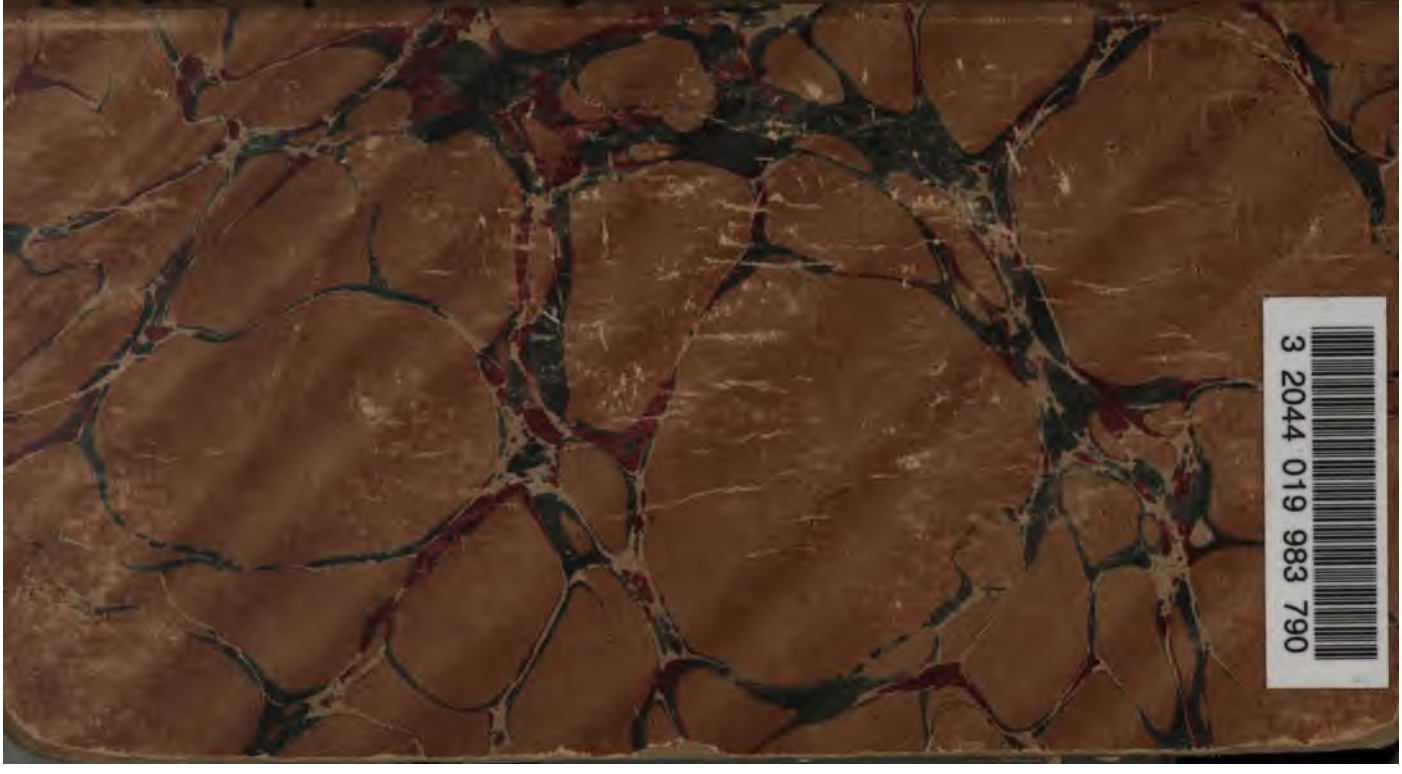

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AND THE

Future of the Anglo-Saxon Race,

BY

REV. JOSIAH STRONG, D.D.;

AND THE

Growth of American Industries and Wealth.

BY

MICHAEL G. MULHALL, F.S.S.,

Author of "The Dictionary of Statistics," "The Balance Sheet of the World," "The History of Prices," etc.

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PREFACE.

The following chapters, dealing with the resources and possibilities of the United States and the future of the Anglo-Saxon race, are taken, by permission, from the 125th edition of the work entitled "Our Country," by Rev. Josiah Strong, D.D., of New York City.

The chapters selected contain so remarkable and graphic a presentation of the possibilities of the future that they will be read with interest throughout the Anglo-Saxon world.

The paper read before the British Association at its last meeting at Bath by the eminent statistical authority, Michael G. Mulhall, F.S.S., is also included in the same volume.

THE UNITED STATES

AND THE

Future of the Anglo-Saxon Race.

CHAPTER I.

NATIONAL RESOURCES.

It is necessary to the argument to show that the United States is capable of sustaining a vast population.

The fathers on Massachusetts Bay once decided that population was never likely to be very dense west of Newton (a suburb of Boston), and the founders of Lynn, after exploring ten or fifteen miles, doubted whether the country was good for anything farther west than that. Until recent times, only less inadequate has been the popular conception of the transmissouri region and the millions destined to inhabit it. Of late years, home missionary writers and speakers have tried to astonish us into some appreciation of our national domain. Yet it may well be doubted whether even he who has pondered most upon its magnitude has a "realizing sense" of it. Though astonishing comparisons have ceased to astonish, I know of no means more effective or more just by which to present our physical basis of empire.

What, then, should we say of a republic of eighteen states each as large as Spain; or one of thirty-one states, each as large as Italy; or one of sixty states, each as large as England and Wales? What a confederation of

nations! Take five of the six first-class Powers of Europe, Great Britain and Ireland, France, Germany, Austria, and Italy; then add Spain, Portugal, Switzerland, Denmark, and Greece. Let some greater than Napoleon weld them into one mighty empire, and you could lay it all down in the United States west of the Hudson River, once, and again, and again—three times. Well may Mr. Gladstone say that we have "a natural base for the greatest continuous empire ever established by man;" and well may the English premier add: "And the distinction between continuous empire and empire severed and dispersed over sea is vital."[1] With the exception of Alaska our territory is compact, and though so vast, is unified by railways and an unequaled system of rivers and lakes. The latter, occupying a larger area than Great Britain and Ireland, are said to contain nearly one-half of all the fresh water on the globe. We are told that east of the Rocky Mountains we have a river-flow of more than 40,000 miles (*i.e.*, 80,000 miles of river-bank), counting no stream less than a hundred miles in length; while Europe in a larger space has but 17,000 miles. It is estimated[2] that the Mississippi, with its affluents, affords 35,000 miles of navigation. A steamboat may pass up the Mississippi and Missouri, 3,900 miles from the Gulf —"as far as from New York to Constantinople."[3] Thus a "vast system of natural canals" carries our sea-board into the very heart of the continent.

But what of the resources of this great empire which makes so brave a display on the map? Alaska is capable of producing great wealth, but not including this

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[1] Kin Beyond the Sea. [2] Encyclopedia Britannica. [3] Dr. Good.

territory, the area of the United States, according to the census of 1880, is 2,970,000 square miles. According to the smallest estimate I have ever seen (and doubtless too small), we have 1,500,000 square miles of arable land. China proper, which, according to her last census, supports a population of 360,000,000, has an area of 1,348,870 square miles, or considerably less than one-half of ours, not including Alaska. The Chinese could hardly be called a manufacturing people; and when their last census was taken (1812), their foreign commerce was inconsiderable. That vast population, therefore, drew its support from the soil. The mountains of China occupy an area of more than 300,000 square miles, and some of her plains are barren. It would seem, then, that our arable lands, taking the lowest estimate, are in excess of those of China by some hundreds of thousands of square miles. The fact, therefore, that Chinese agriculture, with its rude implements, feeds hundreds of millions ought, certainly, to be suggestive to Americans.

The crops of 1879, after feeding our 50,000,000 inhabitants, furnished more than 283,000,000 bushels of grain for export. The corn, wheat, oats, barley, rye, buckwheat and potatoes—that is, the food crops, were that year produced on 105,097,750 acres, or 164,215 square miles. But that is less than one-ninth of the smallest estimate of our arable lands. If, therefore, it were all brought under the plow it would feed 450,000,000 and afford 2,554,000,000 bushels of grain for export. But this is not all. So excellent an authority as Mr. Edward Atkinson says that where we now support 50,000,000 people, "one hundred million could be sustained without increasing the area of a single farm, or

adding one to their number, by merely bringing our product up to our *average standard of reasonably good agriculture;* and then there might remain for export twice the quantity we now send abroad to feed the hungry in foreign lands." If this be true (and it will hardly be questioned by any one widely acquainted with our wasteful American farming), 1,500,000 square miles of cultivated land—less than one-half of our entire area this side of Alaska—are capable of feeding a population of 900,000,000, and of producing an excess of 5,100,000,000 bushels of grain for exportation; or, if the crops were all consumed at home, it would feed a population one-eighth larger; viz., 1,012,000,000. This corresponds very nearly with results obtained by an entirely different process from data afforded by the best scientific authority.[1] It need not, therefore, make a very severe draught on credulity to say that our agricultural resources, if fully developed, would sustain a thousand million souls.

But we have wonderful wealth under the soil as well as in it. From 1870 to 1880 we produced $732,000,000 of the precious metals. The United States now raises one-half the gold and silver of the world's supply. Iron ore is to-day mined in twenty-three of our States. A number of them could singly supply the world's demand. Our coal measures are simply inexhaustible. English coal-pits, already deep, are being deepened, so that the cost of coal-mining in Great Britain is constantly increasing, while we have coal enough near the surface to supply us for centuries. When storing away the fuel for the ages, God knew the place and work to which He had

[1] See Encyclopedia Britannica, Vol. 1, p. 717.

appointed us, and gave to us twenty times as much of this concrete power as to all the peoples of Europe. Among the nations ours is the youngest—the Benjamin—and, Benjamin-like, we have received a five-fold portion. Surely "He hath not dealt so with any people." Our mineral products are of unequaled richness and variety. The remarkable increase from 1870 to 1880[1] places us at the head of the nations. Our mining industries exceed those of Great Britain three per cent., and are greater than those of all continental Europe, Asia, Africa, South America, Mexico, and the British Colonies collectively; and, as yet, we have hardly begun to develop these resources. Thousands of square miles of mineral wealth lie wholly untouched.

Let us glance at our manufactures, present and prospective. Our first great advantage is found in our superabounding coal. Our second lies in the fact that we have our raw material at hand. England must go at least 3,000 miles for every cotton boll she spins; we raise our own. And mills are now being built in the South which manufacture the cotton where it is grown. We produce also the wool, the woods, the hides, the metals of every sort, all that is required for nearly every variety of manufacture. The remaining advantage, which crowns our opportunity, is the quality of our labor, American operatives being, as a class, the most ingenious and intelligent in the world. Inventiveness has come to be a national

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[1] Mulhall.

	1870.	1880.	*Increase.*
Iron ore, tons.....	4,500,000	9,500,000	110 per cent.
Copper ,, ...	12,700	20,300	60 ,,
Coal ,, ...	33,000,000	55,000,000	66 ,,
Petroleum, gallons ...	42,000,000	860,000,000	20-fold.

trait. The United States Government issues four times as many patents as the English. From the Patent Office in Washington there were issued, during 1884, 20,297 patents. At the International Electrical Exposition in Paris, a few years ago, five gold medals were given for the greatest inventions or discoveries. How many of them, think you, came to the United States? *Only five.* *The Mechanical World*, of London, says that the United States has the best machinery and tools in the world; and Mr. Lourdelot, who was recently sent over here by the French Minister of Commerce, says that the superiority of tools used here, and the attention to details too often neglected in Europe, are elements of danger to European industries. Herbert Spencer testifies that "Beyond question, in respect of mechanical appliances, the Americans are ahead of all nations."[1] The fact of superior tools would alone give us no small advantage, but the possession of the best machinery implies much more; viz., that we have also the best mechanics in the world.

In close competition, any one of the three advantages enumerated ought to insure ultimate supremacy; the coincidence, then, of these three great essentials of manufactures, each in such signal measure as to constitute together a triple advantage, must deliver over to us the markets of the world. Already have we won the first rank as a manufacturing people, our products in 1880 having exceeded even those of Great Britain by $650,000,000. So soon is Mr Gladstone's prophecy,

[1] For much additional and weighty testimony to the same point, see report of Massachusetts Bureau of Statistics of Labor for 1879, pp. xiii and xiv.

uttered five or six years ago, finding its fulfilment. Speaking of the United States, he said: "She will probably become what we are now, the head servant in the great household of the world, the employer of all employed, because her service will be the most and ablest." And it is interesting to note not only our position, but our rate of progress. While the manufactures of France, from 1870 to 1880, increased $230,000,000, those of Germany $430,000,000, and those of Great Britain $580,000,000, those of the United States increased $1,030,000,000.[1] Moreover, the marked advantages which we now enjoy are to be enhanced. While England's coal is growing dearer, ours will be growing cheaper. The development of our vast resources will greatly increase, and hence cheapen, raw materials. The superior ingenuity and intelligence of our mechanics and operatives, which enable us now to compete with the cheaper labor of Europe, will continue to give us better machinery, while our rapidly increasing population will cheapen labor. Even now, with cheap labor against us, we can lay down our steels in Sheffield, our lower grades of cotton in Manchester, our electro-plate in Birmingham, and our watches in Geneva, and undersell European manufacturers on their own doorsills. What, then, may we reasonably expect when, with a dense population, cheap labor is no longer against us? And while our manufactures are growing, our markets are to be greatly extended. Steam and electricity have mightily compressed the earth. The elbows of the nations touch. Isolation—the mother of barbarism—is becoming impossible. The mysteries of Africa are

[1] Our total agricultural products for 1880 were $2,625,000,000; our manufactures for the same year were $4,440,000,000.

being laid open, the pulse of her commerce is beginning to beat. South America is being quickened, and the dry bones of Asia are moving; the warm breath of the Nineteenth Century is breathing a living soul under her ribs of death. The world is to be Christianized and civilized. There are about 1,000,000,000 of the world's inhabitants who do not enjoy a Christian civilization. Two hundred millions of these are to be lifted out of savagery. Much has been accomplished in this direction during the past seventy-five years, but much more will be done during the next fifty. And what is the process of civilizing but *the creating of more and higher wants?* Commerce follows the missionary. Five hundred American plows went to the native Christians of Natal in one year. The millions of Africa and Asia are some day to have the wants of a Christian civilization. The beginnings of life in India demand $12,000,000 worth of iron manufactures, and $1,000,000,000 worth of cotton goods in a single year. What will be the wants of Asia a century hence? A Christian civilization performs the miracle of the loaves and fishes, and feeds its thousands in a desert. It multiplies populations. A thousand civilized men thrive where a hundred savages starved. What, then, will be the population and what the wants of Africa a century hence? And with these vast continents added to our market, with our natural advantages fully realized, what is to prevent the United States from becoming the mighty workshop of the world, and our people "the hands of mankind?"

If it is not unreasonable to believe that our agricultural resources alone, when fully developed, are capable of feeding 1,000,000,000, then surely, with our agricul-

tural and mining and manufacturing industries all fully developed, the United States can sustain and *enrich* such a population. Truly has Matthew Arnold said · "America holds the future."

CHAPTER II.

WESTERN SUPREMACY.

"I NEVER felt as if I were out of doors before!" exclaimed a New Englander, as he stepped off the cars west of the Mississippi for the first time.

The West is characterized by largeness. Mountains, rivers, railways, ranches, herds, crops, business transactions, ideas; even men's virtues and vices are cyclopean. All seem to have taken a touch of vastness from the mighty horizon. Western stories are on the same large scale, so large, indeed, that it often takes a dozen eastern men to believe one of them. They have a secret suspicion that even the best attested are inflated exaggerations, which, pricked by investigation, would burst, leaving behind a very small residuum of fact. It will be necessary, therefore, to glance rapidly at the resources of the West, in order to show that it will eventually dominate the East. And by "the West" I mean that portion of the country lying west of the Mississippi, not including Alaska, unless so specified; for, though that territory has vast resources, which will some day add much to our wealth, the national destiny is to be settled this side of Alaska.

Of the twenty-two states and territories west of the Mississippi only three are as small as all New England.

Montana would stretch from Boston on the east to Cleveland on the west, and extend far enough south to include Richmond, Va. Idaho, if laid down in the East, would touch Toronto, Can., on the north, and Raleigh, N.C., on the south, while its southern boundary line is long enough to stretch from Washington City to Columbus, O.; and California, if on our Atlantic seaboard, would extend from the southern line of Massachusetts to the lower part of South Carolina; or, in Europe, it would extend from London across France and well into Spain. New Mexico is larger than the United Kingdom of Great Britain and Ireland. The greatest measurement of Texas is nearly equal to the distance from New Orleans to Chicago, or from Chicago to Boston. Lay Texas on the face of Europe, and this giant, with his head resting on the mountains of Norway, (directly east of the Orkney Islands), with one palm covering London, the other Warsaw, would stretch himself down across the kingdom of Denmark, across the empires of Germany and Austria, across Northern Italy, and lave his feet in the Mediterranean. Dakota might be carved into a half-dozen kingdoms of Greece; or, if it were divided into twenty-six equal counties, we might lay down the two kingdoms of Judah and Israel in each.

Place the 50,000,000 inhabitants of the United States in 1880 all in Texas, and the population would not be as dense as that of Germany. Put them in Dakota, and the population would not be as dense as that of England and Wales. Place them in New Mexico, and the density of population would not be as great as that of Belgium. Those 50,000,000 might all be comfortably sustained in Texas After allowing, say 50,000 square miles

for "desert," Texas could have produced all our food crops in 1879—grown, as we have seen, on 164,215 square miles of land—could have raised the world's supply of cotton, 12,000,000 bales, at one bale to the acre, on 19,000 square miles, and then have had remaining, for a cattle range, a territory larger than the State of New York.

Accounting all of Minnesota and Louisiana west of the Mississippi, for convenience, we have, according to the census of 1880,[1] 2,115,135 square miles in the West and 854,865 in the East. That is, for every acre east of the Mississippi we have nearly two and a half west of it. But what of the "Great American Desert," which occupied so much space on the map a generation ago? It is *nomadic* and elusive; it recedes before advancing civilization like the Indian and buffalo which once roamed it. There are extensive regions, which, because of rocks or lava-beds or alkali or altitude or lack of rain are unfit for the plow; but they afford much of the finest grazing country in the world, much valuable timber, and mineral wealth which is enormous. Useless land, though much in the aggregate, is far less than is commonly supposed, and, in comparison with wealth-producing lands, is almost insignificant. The vast region east of the Rocky Mountains, though once the home of the "Great American Desert," really contains very little useless land. We have all heard of the "Bad Lands" of Dakota, but they comprise only about 75,000 acres out of 94,528,000 in the territory, and even these lands are an excellent stock-range. Mr. E. V. Smalley says:

[1] The areas of the States given in the Ninth Census have been recomputed for the Tenth.

"Cattle come out of the Bad Lands in the spring as fat as though they had been stall-fed all winter."[1] The United States Surveyor-General says: "The proportion of waste land in the territory (Dakota), owing to the absence of swamps, mountain ranges, overflowed and sandy tracts, is less than in any other state or territory in the Union." There are 20,000 square miles of "Bad Lands" in North-western Nebraska, rich in wonderful fossils, but economically worthless. It is often said that the Kansas lands near the Colorado border are alkaline; but Professor Mudge, State Geologist, says that, in fifteen years of exploration, he has found but two springs containing alkalies, and has never seen ten acres of land in one place which has been injured by it. There is probably as little waste land in Kansas as in Illinois. The "Staked Plain" of Texas is sometimes spoken of as a desert; but a Texan writer, who has lived there for years, says of it: "While it is true that this vast territory which we are describing is mainly a grazing country, it is also true that it abounds in fertile valleys and rich locations of large extent, which are as well watered and as fertile as any in the nation." That portion of the "Staked Plain" which is mountainous is rich in minerals.

Driven from the plains east of the Rocky Mountains, the "Great American Desert" seems to have become a fugitive and vagabond on the face of the earth. It was located for a time by the map makers in Utah, but being persecuted there, it fled to Arizona and Nevada. I do not mean to imply that there are no waste lands in Utah. Portions of the territory are as worthless as some of its

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[1] *The Century*, for August, 1882.

people. There are some deserts, one west of the Great Salt Lake, which contains several thousand square miles; but the Surveyor-General of the Territory says: "Notwithstanding the opinion of many who deem our lands 'arid, desert, and worthless,' these same lands, under proper tillage, produce forty to fifty bushels of wheat, seventy to eighty bushels of oats and barley, from two hundred to four hundred bushels of potatoes to the acre, and fruits and vegetables equal to any other state or territory in quantity and quality." There are vast tracts which cannot be irrigated, but it has been discovered that by deep plowing, these same lands, without artificial moisture, can be made to produce bountifully. The culture of these high lands was, the past year, thoroughly successful. Arizona has been considered a waste, and undoubtedly much land there is arid; but, on the other hand, there is much also which is wealth-producing. Gen. J. C. Fremont, who, as Governor of the Territory for several years, had exceptional facilities for gaining information, in his official report in 1878, said: "So far as my present knowledge goes, the grazing and farming lands comprehend an area equal to that of the State of New York." And a writer in *Harper's Magazine* for March, 1883, says: "It is estimated by competent authority that with irrigation, thirty-seven per cent. can be redeemed for agriculture, and sixty per cent. for pasturage."[1] Certain it is that when the Spaniards first visited the territory, in 1526, they found ruins of cities and irrigating canals, which indicated that

[1] From all the information I can gather, this latter estimate seems to me too large. In my computation of the valuable lands of the West, page 21, I have called 55,000 square miles in Arizona—about one-half of the territory—worthless.

it was once densely populated by a civilized race which subsisted by agriculture.

There is more barren land in Nevada than in any other state or territory of the West. The wealth of the state is not agricultural or pastoral, but mineral. Nevertheless the Surveyor-General of the State says: "In our sage-brush lands, alfalfa, the cereals, and all vegetables flourish in profusion where water can be obtained, and the State is speedily becoming one of the great stock-raising States of the Union." A good authority estimates that eventually one-half of the State can be made valuable.

The area in which occur, here and there, most of the worthless lands of the West, is pyramidal in shape, the base extending along the Mexican line into Texas, and the apex being found in the northern part of Idaho. That is, the proportion of useless lands decreases as you go north, until it seems to disappear entirely before reaching the Northern Pacific Railway. Mr. E. V. Smalley, who, in the summer of 1882, traveled the line of that road before its completion, writes:[1] "The whole country traversed through the northern tier of territories, from Eastern Dakota to Washington, is a habitable region. For the entire distance every square mile of the country is valuable either for farming, stock-raising, or timber-cutting. There is absolutely no waste land between the well-settled region of Dakota and the new wheat region of Washington Territory. Even on the tops of the Rocky Mountains there is good pasturage; and the vast timber belt enveloping Clark's Fork and Lake Pend d'Oreille, and the ranges of the Cabinet and Cœur d'Alene Mountains is more valuable than an equal extent of arable land."

[1] *The Century* Magazine for October, 1882.

Comparatively little of the Rocky Mountain region has been surveyed. In the absence of exact knowledge, therefore, we must rely on the estimates of Surveyor-Generals, Governors, and others who have had opportunities to form intelligent opinions concerning the available lands of the West. In some cases official reports of surveys have afforded accurate information; but in most it has been necessary to rely on estimates which pretend to be only approximately correct. I believe they are temperate, and will prove to be rather under than over the truth. According to these estimates, the region west of the Mississippi embraces 785,000 square miles of arable lands, 645,000 of grazing lands, 260,000 of timber lands, and 425,000 square miles which are useless, except so far as they are mineral lands. In weighing these figures several considerations should be borne in mind.

1. Generally speaking, those best acquainted with the West make the largest estimates of its resources and have the most faith in its future.

2. Land often appears worthless which experiment proves to be fertile. For instance, the "Great Columbia Plains" of Eastern Washington. The soil, which varies from one foot to twenty feet in depth, is, except in the bottom lands, a very light-colored loam, containing an unusually large percentage of alkalies and fixed acids. A few years ago, sowing wheat on that soil would have been deemed throwing it away; but the experiment resulted in a revelation, viz., that these 14,000,000 acres of peculiar soil are probably the best wheat fields in all the world. Other illustrations equally striking might be given. Rev. A. Blanchard, Home Missionary Superintendent for East Wyoming and Colorado, writes: "Nothing is more

surprising than the material for supporting a population which continues to be developed in all this region of mountain and plain, which, twenty years ago, was considered an inhospitable desert, capable of supporting nothing but Indians."

3. Barren lands are often rendered fruitful. Water is all that is needed to make most of our western "deserts" blossom as the rose. In 1882 twelve Artesian wells were sunk in Tulare County, California, with astonishing results. They were found to flow from 200,000 to 1,500,000 gallons daily; and where once were barren plains, the fields are a succession of vineyards, orchards, and wheat fields. Since then many of these wells have been sunk in Arizona, Nevada, New Mexico and Colorado. Moreover, the rainfall seems to be increasing with the cultivation of the soil. It is also worthy of note that what rain there is usually falls in those months when it is most needed, and that there is little or none during harvest.

Oftentimes all that a sterile soil needs is treatment with some mineral which Nature has deposited near by.

4. The arable lands in the Rocky Mountains are mainly in valleys, which, like basins, have gathered the *detritus* of the mountains for ages. The soil is, therefore, very deep and strong, yielding much more than the same area in the East; and in the South-west two crops a year from the same soil are very common, so that this land is equal to twice or three times the same area in the East.

5. The above estimate of arable lands in the West does not include the timber lands, a large proportion of which is of the finest quality. Of the 260,000 square miles of timber, 45,000 are in Texas, 26,000 in Arkansas,

and 25,000 in Minnesota. Nearly one-half of the whole is in the Mississippi valley, and a good deal of the remainder is on fine soil, so that it is reasonable to infer that 100,000 square miles, or more, of this timber land would be arable, if cleared. Moreover, much of the 645,000 square miles of grazing land will prove to be arable. We may, therefore, expect the arable lands of the West ultimately to reach 900,000 square miles, and perhaps 1,000,000.

6. A considerable portion of the 854,865 square miles east of the Mississippi is not arable. In New England, New York, and Pennsylvania there are 94,500 square miles of unimproved lands.[1] It is a fair inference that in the old states, where land has long been in demand, so much would not remain unimproved unless generally incapable of improvement. Throughout the many mountain ranges of the entire Appalachian system there is much waste land and more that is not arable. In the absence of any exact data, it would seem, from the facts just given, that there must be not less than 50,000 or 60,000 square miles of waste land east of the Mississippi, and twice as much that is not fit for the plow. This reduces the arable lands of the East to about 700,000 square miles as against 785,000 in the West, with the probable eventual addition to the latter of one or two hundred thousand more. For every acre in the East, bad as well as good, there is another in the West capable of producing food; and, in addition, a timber area as vast as all New England, New York, Pennsylvania, West

[1] New England has 28,468 sq. miles not in farms, 41,500 unimproved
New York ,, 10,402 ,, ,, ,, ,, ,, 29,000 ,,
Pennsylvania ,, 13,952 ,, ,, ,, ,, ,, 24,000 ,,

Virginia, Ohio and Indiana. And this, be it remembered, does not include the magnificent timber lands of Alaska, which William H. Seward said would one day make that territory the ship-yard of the world. And in addition to all this, the West has grazing lands 50,000 square miles broader than the total area of all the states east of the Mississippi not above enumerated. In 1880 there were in the West 61,211,000 head of live stock; and those vast plains are capable of sustaining several times that number. The West, therefore, has 1,690,000 square miles of useful land against 800,000 in the East—more than twice as much.

Nor have we finished our inventory of western wealth. Its mineral resources are simply inexhaustible. The precious metals have been found in most of the states and territories of our Western Empire. From the discovery of gold to June 30th, 1881, California has produced $1,170,000,000 of that metal. The annual product is now from eighteen to twenty-five millions. From 1863 to 1880, Idaho produced $90,000,000 of gold and silver, and Montana from 1861 to 1879, not less than $162,000,000. In twenty years Nevada produced $448,545,000 of the precious metals. The production of Colorado, during the twenty-four years preceding 1883, was $167,000,000. Her out-put for 1882 was $27,000,000. In wealth-producing power a single rich mine represents a great area of arable land. For instance the Comstock Lode, 1877, produced $37,062,252. Those twelve insignificant looking holes in the side of the mountain yielded more wealth that year than 3,890,000 acres planted to corn the same year. That is those few square rods on the surface in Nevada

were as large as all the corn fields of New England, New York, Pennsylvania, Michigan, Wisconsin, and Minnesota collectively. Rocky Mountain wealth, penetrating thousands of feet into the earth, compensates for large areas of barren surface. The agricultural resources of a country do not now, as formerly, determine its possible population. To-day, easy transportation makes regions populous and wealthy which once were uninhabitable. Even if a blade of grass could not be made to grow in all the Rocky Mountain States, that region could sustain 100,000,000 souls, provided it has sufficient mineral wealth to exchange for the produce of the Mississippi valley. Quartz mines have been known in the Rockies for years, which could not be worked without heavy machinery. The inner chambers of God's great granite safes, where the silver and gold have been stored for ages to enrich this generation, are fastened with time locks, set for the advent of the railway. The projection of railway systems into the mountains will rapidly develop these mines. For the year ending May 31st, 1880, the United States produced 55 tons 724 pounds (avoirdupois) of gold, and 1,090 tons 398 pounds of silver. "These huge figures may be better grasped, perhaps, by considering that the gold represents five ordinary car-loads, while a train of 109 freight cars of the usual capacity would be required to transport the silver.[1]

But the precious metals constitute only a small part of the mineral wealth of the West. "An eminent metallurgist and scientist has recently estimated the entire mineral production of the region west of the Mississippi, for the year 1880, as worth $1,000,000,000,

[1] Tenth Census.

and has given the items on which his estimate is based."[1] This sum is equal to the value of five-elevenths of all our agricultural products for the same year. The West has upwards of 200,000 square miles of coal measure, thirty-eight times the area of all the coal fields of Great Britain. Excepting Minnesota, coal has been found in every state and territory west of the Mississippi. And not one is without iron. California has superior ores. The iron of Oregon is equal to the very best Swedish and Russian metal. Wyoming has immense deposits. The supply of Utah is enormous. It is found in some form in every county of Missouri. Iron Mountain and Pilot Knob are estimated to contain 500,000,000 tons of the finest ore. There are great masses of iron in Texas, probably equal in quantity and quality to any deposits in the world. Lead is found in all the states and territories of the West, except Minnesota, Nebraska, and the Indian Territory. In many of them the ores are rich and abundant. The lead-producing area in Missouri is over 5,000 square miles. The product of that state in 1877 was over 63,000,000 pounds. Nebraska and Kansas alone are without copper. Rich ores and native metal abound in what seem inexhaustible quantities. The deposits of salt are without computation. Besides salt springs and lakes, which yield great quantities, there are beds of unknown depth covering thousands of acres. Sulphur also is exceedingly abundant. In Idaho there is a mountain which is eighty-five per cent. pure sulphur. A deposit in Louisiana, equally pure, is 112 feet thick. Nevada has borax enough to supply mankind. In Wyoming there are lakes in which the deposits

[1] Our Western Empire, p. 212.

of sulphate of soda are from ten to fifteen feet in thickness, and almost chemically pure. Gypsum abounds. Texas has the largest deposits known in the world; "enough to supply the universe for centuries." The Colorado River of Texas cuts its way through mountains of solid marble. In many parts of the Rocky Mountains there are the finest building stones, granite, sandstone and marble, of all possible colors and shades, without end. It would be tiresome simply to enumerate the valuable minerals which swell the undeveloped wealth of the West. If recent reports are correct, it is not denied even tin, the world's supply of which has hitherto been so limited. Inconsiderable deposits have been found in several states and territories; but Prof. Bailey, United States Geologist for Montana, states that in the region of Harney's Peak, he has found tin-bearing rock that can be quarried from the surface, that there are veins measuring more than fifty feet in width which will average much better than those in Cornwall. He declares that there is enough to supply the world, and says that it is impossible to imagine this great body of ore ever being exhausted. If these statements are correct, the discovery is one of the most important of the century.

The unrivaled resources of the West, together with the unequaled enterprise of her citizens, are a sure prophecy of superior wealth. Already have some of these young States outstripped older sisters at the East, as is seen by the following statement of wealth per caput according to the assessed valuation of property in 1880:—

In South Carolina ...	$110	In Kansas	$161
,, Illinois	255	,, Minnesota	330
,, Vermont	259	,, Colorado	331
,, Indiana	368	,, Montana	475
,, New York	538	,, California	674

The West is destined to surpass in agriculture, stock-raising, mining, and eventually in manufacturing. Already appears the superiority of her climate, which Montesquieu declares "is the most powerful of all empires, and gives guaranty alone of future development." Every advantage seems to be hers save only greater proximity to Europe, and if the East commands European commerce, the Golden Gate opens upon Asia, and is yet to receive

——"the wealth of Ormus and of Ind,"

and send her argosies to all the ports of the broad Pacific.

Beyond a peradventure, the West is to dominate the East. With more than twice the room and resources of the East, the West will have probably twice the population and wealth of the East, together with the superior power and influence which, under popular government, accompany them. The West will elect the executive and control legislation. When the center of population crosses the Mississippi, the West will have a majority in the lower House, and sooner or later the partition of her great territories, and probably some of the States, will give to the West the control of the Senate. When Texas is as densely peopled as New England, it is hardly to be supposed her millions will be content to see the 62,000 square miles east of the Hudson send twelve senators to the seat of government, while her territory of 262,000 sends only two. The West will direct the policy of the Government, and by virtue of her preponderating population and influence will determine our national character, and, therefore, destiny.

Since prehistoric times populations have moved steadily westward, as De Tocqueville said, "as if driven by the mighty hand of God." And following their migrations,

the course of empire, which Bishop Berkeley sang, has westward taken its way. The world's scepter passed from Persia to Greece, from Greece to Italy, from Italy to Great Britain, and from Great Britain the scepter is to-day departing. It is passing on to "Greater Britain," to our mighty West, there to remain, for there is no further West; beyond is the Orient. Like the star in the East which guided the three kings with their treasures westward until at length it stood still over the cradle of the young Christ, so the star of empire, rising in the East, has ever beckoned the wealth and power of the nations westward, until to-day it stands still over the cradle of the young empire of the West, to which the nations are bringing their offerings.

The West is to-day an infant, but shall one day be a giant, in each of whose limbs shall unite the strength of many nations.

CHAPTER III.

THE EXHAUSTION OF THE PUBLIC LANDS.

THOMAS CARLYLE once said to an American: "Ye may boast o' yer dimocracy, or any ither 'cracy, or any kind o' poleetical roobish; but the reason why yer laboring folk are so happy is thoth ye have a *vost deal o' land for a verra few people.*" Carlyle was not the man to take an unprejudiced view of republican institutions; but he was not mistaken in finding great significance in the fact that heretofore our land has been vastly greater than its population. The rapid accumulation of our wealth, our comparative immunity from the consequences of un-

scientific legislation, our financial elasticity, our high wages, the general welfare and contentment of the people hitherto have all been due, in very large measure, to an abundance of cheap land. When the supply is exhausted, we shall enter upon a new era, and shall more rapidly approximate European conditions of life. The gravity of the change was clearly foreseen by Lord Macaulay, and expressed in his well-known letter to Hon. H. S. Randall, in 1857—a letter which General Garfield said startled him "like an alarm bell in the night." "Your fate," says Macaulay, "I believe to be certain, though it is deferred by a physical cause. As long as you have a boundless extent of fertile and unoccupied land, your laboring population will be far more at ease than the laboring population of the Old World. . . . But the time will come when New England will be as thickly peopled as Old England Wages will be as low, and will fluctuate as much with you as with us. You will have your Manchesters and Birminghams. And in those Manchesters and Birminghams hundreds of thousands of artisans will assuredly be some time out of work. Then your institutions will be fairly brought to the test. . . . Through such seasons the United States will have to pass in the course of the next century, if not of this. I wish you a good deliverance. But my reason and my wishes are at war, and I cannot help forboding the worst."

What is the extent of these public lands whose occupation means so much? The public domain west of the Mississippi, not including Alaska, is estimated to have been, in 1880, 880,787,746 acres.[1] This includes land

[1] The following table, showing the location of public lands, is compiled from "Spaulding on Public Lands," pp. 6, 7.

necessary to fill railroad grants, estimated at 110,000,000 acres, also private land claims estimated[1] at 80,000,000 acres, together with military and Indian reservations estimated at 157,356,952 acres. Supposing all of the military and Indian reservations to revert to the public domain save 57,000,000 acres, there remained of the public lands west of the Mississippi, in 1880, yet to be disposed of, about 633,787,746 acres. This seems an almost inexhaustible supply, but we must remember the magnitude of the demand. In 1881, the Government parted with 10,893,397 acres; in 1882, 14,309,166; in 1883, 19,430,032; and in 1884, 27,531,170—a slice considerably larger than the State of Ohio, in a single year, and a total in the four years of 72,163,765 acres, leaving

	Surveyed and Unsold Acres.	*Unsurveyed Acres.*	*Total.*
Arizona	1,561,231	67,098,366	68,659,597
Arkansas	4,620,120	.....	4,620,120
California	25,250,680	48,643,592	73,894,272
Colorado	20,489,312	40.657,670	61,146,982
Dakota	12,225,492	71,422,103	83,647,595
Idaho	3,925,237	47,739,368	51,664,605
Indian Territory	.....	17,150,250	17,150,250
Kansas	28,049.731	.....	28,049,731
Louisiana	2,130,000	.....	2,130,000
Minnesota	13,383,813	13,510,423	26,894,236
Missouri	1,000,000	.....	1,000,000
Montana	5,779,452	80,651,676	86,431,128
Nebraska	23,958,652	7,052,207	31,010,859
Nevada	8,337,671	58,436,598	66,774,269
New Mexico	6,042,409	67,024,990	73,067,399
Oregon	12,906,700	37,908,340	50,815,040
Utah	5,685,054	44,282,680	49,967,734
Washington	9,088,338	28,836,985	37,925,323
Wyoming	5,645,121	53,381,485	59,026,606
Public Land strip	.....	6,912,000	6,912,000
Grand total			880,787,746

[1] George W. Spaulding.

in the hands of the Government at the present time about 561,623,981 acres. Not only is the amount annually disposed of enormous, but, as we have seen, it is very rapidly increasing. Even if the increase should cease, the demand for 1884, steadily continued, would exhaust the supply in *twenty years*. It must not be forgotten that these 561,000,000 acres include the great mountain ranges, and all the barren lands. Only a comparatively small portion is arable. The farming lands of the West, therefore, will all be taken before the close of this century. And under private ownership they will appreciate in value with the increase of population. Senator Wade, of Ohio, predicted, in the United States Senate, some twenty years ago, that, by 1900, every acre of good agricultural land in the Union would be worth at least fifty dollars. However that may be, it is certain our wide domain will soon cease to palliate popular discontent, because it will soon be beyond the reach of the poor.

But the settlement of the public lands has a further and even deeper significance. The first permanent settlers, as we have seen in the preceding chapter, impress their character on the community and commonwealth for generations and centuries; and this abiding stamp is to be given to the great West in the course of the *next fifteen or twenty years*. True, the land is not settled as rapidly as it is disposed of by the Government. Many acres have passed into the hands of wealthy syndicates or individual capitalists, and are held by them for a rise in value; but this can delay actual settlement for a short time only, and does not modify the general statement that the great West is to be settled by this generation. Robert Giffen, President of the London

Statistical Society, in an address on "World Crowding,"[1] after following several lines of reasoning to the same conclusion, says: "Whatever way we may look at the matter, then, it seems certain that, in twenty-five years' time, and probably before that date, the limitation of area in the United States will be felt. There will be no longer vast tracts of virgin land for the settler. The whole available area will be peopled agriculturally, as the Eastern States are now peopled." Suppose the entire region west of the Mississippi—not excepting bald mountains and alkaline deserts—were divided into townships six miles square. From 1870 to 1880 the transmississippi population increased a little more than sixty-one per cent.[2] If that ratio of increase is sustained to the close of the century (and there is abundant reason to believe that it will *rise*), in 1900 there will be a population of 30,165,000 —sufficient, if it were evenly distributed, to place 530 souls in every township west of the great river. The natural distribution of such a population would manifestly result in the settlement of all the habitable regions. Consider the location of the unoccupied land. It is not a vast island, like Australia, separated by thousands of miles from its sources of population. It lies close to one of the greatest peoples of the earth; and not on our north or south, but on our *west*, which is important, because great migrations move along lines of latitude. Moreover, this great territory is gridironed with trans-

[1] "Topics of the Time." Vol. I., No. 1, p. 36.

[2] During the same period the average per cent. of increase of population in all the states of the Union was 29—in the territories, 77. Idaho increased 117 per cent., Wyoming, 127, Washington, 213, Arizona, 318, Dakota, 853.

continental railways. Every circumstance favors its rapid occupation.

We must note, also, the order of settlement. In the Middle States the farms were first taken, then the town sprung up to supply their wants, and at length the railway connected it with the world; but in the West the order is reversed—first the railroad, then the town, then the farms. Settlement is, consequently, much more rapid and the city stamps the country, instead of the country stamping the city. It is the cities and towns which will frame state constitutions, make laws, create public opinion, establish social usages, and fix standards of morals in the West. The character of the West, will, therefore, be substantially determined some time before the land is all occupied.

In 1880, fifty-three per cent. of our national domain (not including Alaska) contained only six per cent. of our population. That is, one-half of our territory was, for the most part, uninhabited. The character of this vast region, equal in area to Great Britain, France, Spain, Italy, Austria, Germany, Norway and Sweden, together with a dozen of the smaller European states, is to be determined during the last twenty years of the century. Suppose all of Western Europe were practically uninhabited, that to-day the pioneer were pitching his tent by the Thames and the Seine, and building his log cabin on the banks of the Tiber. He takes with him not the rude implements of centuries ago, but the locomotive, the telegraph, the steam-press, and all the swift appliances of modern civilization. Suppose the countries named above were all to be settled in twenty years; that, instead of the slow evolutions of many centuries, their polictical, so

religious, and educational institutions were to be determined by one generation; that from this one generation were to spring a civilization, like Minerva from the head of Jupiter, full-grown and fully equipped. What a period in the world's history it would be, unparalleled and tremendous! Yet such a Europe is being created by this generation west of the Mississippi. And within the bosom of these few years is folded not only the future of the mighty West, but the nation's destiny; for, as we have seen, the West is to dominate the East.

CHAPTER IV.

THE ANGLO-SAXON AND THE WORLD'S FUTURE.[1]

EVERY race which has deeply impressed itself on the human family has been the representative of some great idea—one or more—which has given direction to the nation's life and form to its civilization. Among the Egyptians this seminal idea was life, among the Persians it was light, among the Hebrews it was purity, among the Greeks it was beauty, among the Romans it was law. The Anglo-Saxon is the representative of two great ideas, which are closely related. One of them is that of civil liberty. Nearly all of the civil liberty in the world is enjoyed by Anglo-Saxons; the English, the British colonists, and the people of the United States. To some, like the Swiss, it is permitted by the sufferance of

[1] It is only just to say that the substance of this chapter was given to the public as a lecture some three years before the appearance of Prof. Fiske's "Manifest Destiny," in *Harper's Magazine*, for March, 1885, which contains some of the same ideas.

their neighbors; others, like the French, have experimented with it; but, in modern times, the peoples whose love of liberty has won it, and whose genius for self-government has preserved it, have been Anglo-Saxons. The noblest races have always been lovers of liberty. That love ran strong in early German blood, and has profoundly influenced the institutions of all the branches of the great German family; but it was left for the Anglo-Saxon branch fully to recognize the right of the individual to himself, and formally to declare it the foundation stone of government.

The other great idea of which the Anglo-Saxon is the exponent is that of a pure *spiritual* Christianity. It was no accident that the great reformation of the sixteenth century originated among a Teutonic, rather than a Latin people. It was the fire of liberty burning in the Saxon heart that flamed up against the absolutism of the Pope. Speaking roughly, the peoples of Europe which are Celtic are Catholic, and those which are Teutonic are Protestant; and where the Teutonic race was purest, there Protestantism spread with the greatest rapidity. But, with rare and beautiful exceptions, Protestantism on the continent has degenerated into mere formalism. By confirmation at a certain age, the state churches are filled with members who generally know nothing of a personal spiritual experience. In obedience to a military order, a regiment of German soldiers files into church and partakes of the sacrament, just as it would shoulder arms or obey any other word of command. It is said that, in Berlin and Leipsic, only a little over one per cent. of the Protestant population are found in church. Protestantism on the continent seems to be about as

poor in spiritual life as Catholicism. That means that most of the spiritual christianity in the world is found among Anglo-Saxons and their converts; for this is the great missionary race. If we take all of the German missionary societies together, we find that, in the number of workers and amount of contributions, they do not equal the smallest of the three great English missionary societies. The year that Congregationalists in the United States gave one dollar and thirty-seven cents per caput to foreign missions, the members of the great German State Church gave only three-quarters of a cent. per caput to the same cause.[1] Evidently it is chiefly to the English and American peoples that we must look for the evangelization of the world.

It is not necessary to argue to those for whom I write that the two great needs of mankind, that all men may be lifted up into the light of the highest Christian civilization are, first, a pure spiritual Christianity, and, second, civil liberty. Without controversy, these are the forces which, in the past, have contributed most to the elevation of the human race, and they must continue to be, in the future, the most efficient ministers to its progress. It follows, then, that the Anglo-Saxon, as the great representative of these two ideas, the depository of these two greatest blessings, sustains peculiar relations to the world's future, is divinely commissioned to be, in a peculiar sense, his brother's keeper. Add to this the fact of his rapidly increasing strength in modern times, and we have well nigh a demonstration of his destiny. In 1700 this race numbered less than 6,000,000 souls. In 1800, Anglo-has (I use the term somewhat broadly to include the e

tions

[1] Strieb's "Protestant Foreign Missions," pp. 34 and 37.

all English-speaking peoples) had increased to 20,500,000, and in 1880 they numbered nearly 10c 000, having multiplied almost five-fold in eighty At the end of the reign of Charles II. the E colonists in America numbered 200,000. During the hundred years our population has increased two hu and fifty-fold. And the expansion of this race ha: no less remarkable than its multiplication. Ii century the United States has increased its territoı fold, while the enormous acquisition of foreign te: by Great Britain—and chiefly within the last hu years—is wholly unparalleled in history. This r Anglo-Saxon race, though comprising only one-fif part of mankind, now rules more than one-third earth's surface, and more than one-fourth of its p And if this race, while growing from 6,000,oc 100,000,000, thus gained possession of a third port the earth, is it to be supposed that when it nu 1,000,000,000, it will lose the disposition, or lac power to extend its sway?

This race is multiplying not only more rapidly th: other European race, but far more rapidly than a races of continental Europe. There is no exact ledge of the population of Europe early in the c we know, however, that the increase on the co during the ten years from 1870 to 1880 was 6 cent. If this rate of increase is sustained for a (and it is more likely to fall as Europe becom crowded), the population on the continent in 198 534,000,000; while the one Anglo-Saxon race, if i multiply for a hundred years as it increased from 1880, would, in 1980, number 1,343,000,000 so

we cannot reasonably expect this ratio of increase to be sustained so long. What, then, will be the probable numbers of this race a hundred years hence? In attempting to answer this question several things must be borne in mind. Heretofore, the great causes which have operated to check the growth of population in the world have been war, famine, and pestilence; but, among civilized peoples, these causes are becoming constantly less operative. Paradoxical as it seems, the invention of more destructive weapons of war renders war less destructive; commerce and wealth have removed the fear of famine, and pestilence is being brought more and more under control by medical skill and sanitary science. Moreover, Anglo-Saxons, with the exception of the people of Great Britain, who now compose only a little more than one-third of this race, are much less exposed to these checks upon growth than the races of Europe. Again, Europe is crowded, and is constantly becoming more so, which will tend to reduce continually the ratio of increase; while nearly two-thirds of the Anglo-Saxons occupy lands which invite almost unlimited expansion—the United States, Canada, Australia, and South Africa. Again, emigration from Europe, which is certain to increase, is chiefly into Anglo-Saxon countries; while these foreign elements exert a modifying influence on the Anglo-Saxon stock, their descendants are certain to be Anglo-Saxonized. From 1870 to 1880 Germany lost 987,000 inhabitants by emigration; in one generation their children will be counted Anglo-Saxons. This race has been undergoing an unparalleled expansion during the eighteenth and nineteenth centuries, and the conditions for its continued growth are singularly favorable.

We are now prepared to ask what light statistics ca on the future. In Great Britain, from 1840 to 1850, t ratio of increase of the population was 2.49 per cent during the next ten years it was 5.44 per cent.; the ne ten years, it was 8.60; and from 1870 to 1880 it w 10.57 per cent. That is, for forty years the ratio increase has been rapidly rising. It is not unlikely continue rising for some time to come; but, rememberi that the population is dense, in making our estimate fo the next hundred years, we will suppose the ratio o increase to be only one-half as large as that from 1870 t 1880, which would make the population in 1980 57,000,000. All the great colonies of Britain, excep Canada, which has a great future, show a very high rati of increase in population; that of Australia, from 187 to 1880, was 56.50 per cent.; that of South Africa wa 73.28. It is quite reasonable to suppose that the colonie taken together, will double their population once i twenty-five years for the next century. In the Unite States, population has, on the average, doubled once i twenty-five years since 1685. Adopting this ratio, then for the English colonies, their 11,000,000 in 1880 will b 176,000,000 in 1980. Turning now to our own country we find in the following table the ratio of increase o population for each decade of years since 1800:—

From 1800 to 1810		36.38	per cent.
„ 1810 „ 1820		34.80	„
„ 1820 „ 1830		33.11	„
„ 1830 „ 1840		32.66	„
„ 1840 „ 1850		35.87	„
„ 1850 „ 1860		35.58	„
„ 1860 „ 1870		22.59	„
„ 1870 „ 1880		30.06	„

Here we see a falling ratio of increase of about one pe

cent. every ten years from 1800 to 1840—a period when immigration was inconsiderable. During the next twenty years the ratio was decidedly higher, because of a large immigration. It fell off during the war, and again rose from 1870 to 1880. Increased immigration is likely to sustain this high ratio of increase for some time to come. If it should continue for a hundred years, our population in 1980 would be 697,000,000. But suppose we take no account of immigration, leaving it to offset any unforeseen check upon growth, we may infer from the first forty years of the century that the ratio of increase would not fall more than about one per cent. every ten years. Beginning, then, with an increase of thirty per cent. from 1880 to 1890, and adopting this falling ratio of increase, our population in 1980 would be 480,000,000, making the total Anglo-Saxon population of the world, at that time, 713,000,000, as compared with 534,000,000 inhabitants of continental Europe. And it should be remembered that these figures represent the largest probable population of Europe, and the smallest probable numbers of the Anglo-Saxon race. It is not unlikely that, before the close of the next century, this race will outnumber all the other civilized races of the world. Does it not look as if God were not only preparing in our Anglo-Saxon civilization the die with which to stamp the peoples of the earth, but as if he were also massing behind that die the mighty power with which to press it? My confidence that this race is eventually to give its civilization to mankind is not based on mere numbers—China forbid! I look forward to what the world has never yet seen united in the same race, viz., the greatest numbers, *and* the highest civilization.

There can be no reasonable doubt that North America is to be the great home of the Anglo-Saxon, the principal seat of his power, the center of his life and influence. Not only does it constitute seven-elevenths of his possessions, but his empire is unsevered, while the remaining four-elevenths are fragmentary and scattered over the earth. Australia will have a great population; but its disadvantages, as compared with North America, are too manifest to need mention. Our continent has room and resources and climate, it lies in the pathway of the nations, it belongs to the zone of power, and already, among Anglo-Saxons, do we lead in population and wealth. Of England, Franklin once wrote: "That pretty island which, compared to America, is but a stepping-stone in a brook, scarce enough of it above water to keep one's shoes dry." England can hardly hope to maintain her relative importance among Anglo-Saxon peoples when her "pretty island" is the home of only one-twentieth part of that race. With the wider distribution of wealth, and increasing facilities of intercourse, intelligence and influence are less centralized, and peoples become more homogeneous; and the more nearly homogeneous peoples are, the more do *numbers tell.* America is to have the great preponderance of numbers and of wealth, and by the logic of events will follow the scepter of controlling influence. This will be but the consummation of a movement as old as civilization—a result to which men have looked forward for centuries. John Adams records that nothing was "more ancient in his memory than the observation that arts, sciences and empire had traveled westward; and in conversation it was always added that their next leap would be over the Atlantic into America." He recalled

a couplet that had been "inscribed, or rather drilled, into a rock on the shore of Monument Bay in our old colony of Plymouth:—

> 'The Eastern nations sink, their glory ends,
> And empire rises where the sun descends.'"[1]

The brilliant Galiani, who foresaw a future in which Europe should be ruled by America, wrote, during the Revolutionary War, "I will wager in favour of America, for the reason merely physical, that for 5,000 years genius has turned opposite to the diurnal motion, and traveled from the East to the West."[2] Count d'Aranda, after signing the Treaty of Paris of 1773, as the representative of Spain, wrote his king: "This Federal Republic is born a pigmy. . . . a day will come when it will be a giant, even a colossus formidable in these countries."

Adam Smith, in his "Wealth of Nations," predicts the transfer of empire from Europe to America. The traveler, Burnaby, found, in the middle of the last century, that an idea had "entered into the minds of the generality of mankind, that empire is traveling westward; and every one is looking forward with eager and impatient expectation to that destined moment when America is to give the law to the rest of the world." Charles Sumner wrote of the "coming time when the whole continent, with all its various states, shall be a Plural Unit, with one Constitution, one Liberty and one Destiny," and when "the national example will be more puissant than army or navy for the conquest of the world."[3] It surely needs no prophet's eye to see that the civilization of the *United States* is to be the civilization of America, and that the future of the

[1] John Adams' Works, Vol. IX, pp. 597—599.
[2] Galiani, Tome II. p. 275.
[3] See the *Atlantic*, Vol. 20, pp. 275—306.

continent is ours. In 1880, the United States was the home of more than one-half of the Anglo-Saxon race; and, if the computations already given are correct, a much larger proportion will be here a hundred years hence. It has been shown that we have room for at least a thousand millions. According to recent figures, there is in France a population of 180.88 to the square mile; in Germany, 216.62; in England and Wales, 428.67; in Belguim, 481.71; in the United States—not including Alaska—6.88. If our population were as dense as that of France we should have, this side of Alaska, 537,000,000; if as dense as that of Germany, 643,000,000; if as dense as that of England and Wales, 1,173,000,000; if as dense as that of Belguim, 1,430,000,000.

But we are to have not only the larger portion of the Anglo-Saxon race; for generations to come we may reasonably expect to develop the highest type of Anglo-Saxon civilization. If human progress follows a law of development, if

"Time's noblest offspring is the last,"

our civilization should be the noblest; for we are

"The heirs of all the ages in the foremost files of time,"

and not only do we occupy the latitude of power, but *our land is the last to be occupied in that latitude.* There is no other virgin soil in the North Temperate Zone. If the consummation of human progress is not to be looked for here, if there is yet to flower a higher civilization, where is the soil that is to produce it? Whipple says:[1] "There has never been a great migration that did not result in a new form of national genius." Our national genius is Anglo-Saxon, but not English; its distinctive

[1] *Atlantic* for October, 1858.

type is the result of a finer nervous organization, which is certainly being developed in this country. "The history of the world's progress from savagery to barbarism, from barbarism to civilization, and, in civilization, from the lower degrees toward the higher, is the history of increase in average longevity,[1] corresponding to, and accompanied by, increase of nervousness. Mankind has grown to be at once more delicate and more enduring, more sensitive to weariness and yet more patient of toil, impressible, but capable of bearing powerful irritation; we are woven of finer fibre, which, though apparently frail, yet outlasts the coarser, as rich and costly garments oftentimes wear better than those of rougher workmanship."[2] The roots of civilization are the nerves; and, other things being equal, the finest nervous organization will produce the highest civilization. Heretofore, war has been almost the chief occupation of strong races. England, during the past sixty-eight years, has waged some seventy-seven wars. John Bright said recently that, during Queen Victoria's reign, $750,000,000 had been spent in war and 68,000 lives lost. The mission of the Anglo-Saxon has been largely that of the soldier. But the world is making progress, we are leaving behind the barbarism of war. As civilization advances, it will learn less of war, and concern itself more with the arts of peace, and for these the massive battle-ax must be wrought into tools of finer temper. The physical changes, accompanied by mental, which are taking place in the

[1] "It is ascertained that the average measure of human life, in this country, has been steadily increasing during this century, and is now *considerably longer than in any other country*." Dorchester's "Problem of Religious Progress," p. 288.

[2] "Beard's American Nervousness," p. 287.

people of the United States are apparently to adapt men to the demands of a higher civilization. But the objection is here interposed that the "physical degeneracy of Americans" is inconsistent with the supposition of our advancing to a higher civilization. Professor Huxley, when at Buffalo, addressing the American Association for the Advancement of Science, said he had heard of the degeneration of the original American stock, but during his visit to the states he had failed to perceive it. We are not, however, in this matter, dependent on the opinion of even the best observers. During the War of the Confederacy, the Medical Department of the Provost Marshal General's Bureau gathered statistics from the examination of over half a million of men, native and foreign, young and old, sick and sound, drawn from every rank and condition of life, and, hence fairly representing the whole people. Dr. Baxter's Official Report shows that our native whites were over an inch taller than the English, and nearly two-thirds of an inch taller than the Scotch, who, in height, were superior to all other foreigners. At the age of completed growth, the Irish, who were the stoutest of the foreigners, surpassed the native whites, in girth of chest, less than a quarter of an inch. Statistics as to weight are meager, but Dr. Baxter remarks that it is perhaps not too much to say that the war statistics show "that the mean weight of the white native of the United States is not disproportionate to his stature." Americans were found to be superior to Englishmen, not only in height, but also in chest-measurement and weight. Such facts afford more than a hint that the higher civilization of the future will not lack an adequate physical basis in the people of the United States.

Mr. Darwin is not only disposed to see, in the superior vigor of our people, an illustration of his favorite theory of natural selection, but even intimates that the world's history thus far has been simply preparatory for our future, and tributary to it. He says:[1] "There is apparently much truth in the belief that the wonderful progress of the United States, as well as the character of the people, are the results of natural selection; for the more energetic, restless, and courageous men from all parts of Europe have emigrated during the last ten or twelve generations to that great country, and have there succeeded best. Looking at the distant future, I do not think that the Rev. Mr. Zincke takes an exaggerated view when he says: 'All other series of events—as that which resulted in the culture of mind in Greece, and that which resulted in the Empire of Rome—only appear to have purpose and value when viewed in connection with, or rather as subsidiary to, the great stream of Anglo-Saxon emigration to the West.'"

There is abundant reason to believe that the Anglo-Saxon race is to be—is, indeed, already becoming—more effective here than in the mother country. The marked superiority of this race is due, in large measure, to its highly mixed origin. Says Rawlinson:[2] "It is a general rule, now almost universally admitted by ethnologists, that the mixed races of mankind are superior to the pure ones;" and adds: "Even the Jews, who are so often cited as an example of a race at once pure and strong, may, with more reason, be adduced on the opposite side of the argument." The ancient Egyptians, the Greeks, and the Romans, were all mixed races. Among modern races, the most

[1] Descent of Man, part 1, p. 142.

[2] *Princeton Review* for November, 1878.

conspicuous example is afforded by the Anglo-Saxons. Mr. Green's studies show that Mr. Tennyson's poetic line

"Saxon and Norman and Dane are we,"

must be supplemented with Celt and Gaul, Welshman and Irishman, Frisian and Flamand, French Huguenot and German Palatine. What took place a thousand years ago and more in England again transpires to-day in the United States. "History repeats itself:" but, as the wheels of history are the chariot-wheels of the Almighty, there is, with every revolution, an onward movement toward the goal of his eternal purposes. There is here a new commingling of races; and, while the largest injections of foreign blood are substantially the same elements that constituted the original Anglo-Saxon admixture, so that we may infer the general type will be preserved, there are strains of other bloods being added, which, if Mr. Emerson's remark is true, that "the best nations are those most widely related," may be expected to improve the stock, and aid it to a higher destiny. If the dangers of immigration, which have been pointed out, can be successfully met for the next few years, until it has passed its climax, it may be expected to add value to the amalgam which will constitute the new Anglo-Saxon race of the New World. Concerning our future, Herbert Spencer says: "One great result is, I think, tolerably clear. From biological truths it is to be inferred that the eventual mixture of the allied varieties of the Aryan race forming the population, will produce a more powerful type of man than has hitherto existed, and a type of man more plastic, more adaptable, more capable of undergoing the modifications needful for complete social life. I think, whatever difficulties they may have to surmount, and whatever

tribulations they may have to pass through, the Americans may reasonably look forward to a time when they will have produced a civilization grander than any the world has known."

It may be easily shown, and is of no small significance, that the two great ideas of which the Anglo-Saxon is the exponent are having a fuller development in the United States than in Great Britain. There the union of Church and State tends strongly to paralyze some of the members of the body of Christ. Here there is no such influence to destroy spiritual life and power. Here, also has been evolved the form of government consistent with the largest possible civil liberty. Furthermore, it is significant that the marked characteristics of this race are being here emphasized most. Among the most striking features of the Anglo-Saxon is his money-making power—a power of increasing importance in the widening commerce of the world's future. We have seen, in a preceding chapter, that, although England is by far the richest nation of Europe, we have already outstripped her in the race after wealth, and we have only begun the development of our vast resources.

Again, another marked characteristic of the Anglo-Saxon is what may be called an instinct or genius for colonizing. His unequaled energy, his indomitable perseverance, and his personal independence, made him a pioneer. He excels all others in pushing his way into new countries. It was those in whom this tendency was strongest that came to America, and this inherited tendency has been further developed by the westward sweep of successive generations across the continent. So noticeable has this characteristic become that English visitors

remark it. Charles Dickens once said that the typical American would hesitate to enter heaven unless assured that he could go further west.

Again, nothing more manifestly distinguishes the Anglo-Saxon than his intense and persistent energy; and he is developing in the United States an energy which, in eager activity and effectiveness, is peculiarly American. This is due partly to the fact that Americans are much better fed than Europeans, and partly to the undeveloped resources of a new country, but more largely to our climate, which acts as a constant stimulus. Ten years after the landing of the Pilgrims, the Rev. Francis Higginson, a good observer, wrote:—"A sup of New England air is better than a whole flagon of English ale." Thus early had the stimulating effect of our climate been noted. Moreover, our social institutions are stimulating. In Europe the various ranks of society are, like the strata of the earth, fixed and fossilized. There can be no great change without a terrible upheaval—a social earthquake. Here society is like the waters of the sea, mobile. As General Garfield said, and so signally illustrated in his own experience, that which is at the bottom to-day may one day flash on the crest of the highest wave. Every one is free to become whatever he can make of himself; free to transform himself from a rail-splitter or a tanner or a canal boy into the nation's President. Our aristocracy, unlike that of Europe, is open to all comers. Wealth, position, influence, are prizes offered for energy; and every farmer's boy, every apprentice and clerk, every friendless and penniless immigrant, is free to enter the lists. Thus many causes co-operate to produce here the most forceful and tremendous energy in the world.

What is the significance of such facts? These tendencies infold the future; they are the mighty alphabet with which God writes His prophecies. May we not, by a careful laying together of the letters, spell out something of His meaning? It seems to me that God, with infinite wisdom and skill, is training the Anglo-Saxon race for an hour sure to come in the world's future. Heretofore there has always been in the history of the world a comparatively unoccupied land westward, into which the crowded countries of the East have poured their surplus populations. But the widening waves of migration which, millenniums ago, rolled east and west from the valley of the Euphrates, meet to-day on our Pacific coast. There are no more new worlds. The unoccupied arable lands of the earth are limited, and will soon be taken. The time is coming when the pressure of population on the means of subsistence will be felt here as it is now felt in Europe and Asia. Then will the world enter upon a new stage of its history—*the final competition of races, for which the Anglo-Saxon is being schooled.* Long before the thousand millions are here, the mighty *centrifugal* tendency, inherent in this stock and strengthened in the United States, will assert itself. Then this race of unequaled energy, with all the majesty of numbers and the might of wealth behind it—the representative, let us hope, of the largest liberty, the purest Christianity, the highest civilization—having developed peculiarly aggressive traits calculated to impress its institutions upon mankind, will spread itself over the earth. If I read not amiss, this powerful race will move down upon Mexico, down upon Central and South America, out upon the islands of the sea, over upon Africa and beyond. And

can any one doubt that the result of this competition of races will be the "survival of the fittest?" "Any people," says Dr. Bushnell, "that is physiologically advanced in culture, though it be only in a degree beyond another which is mingled with it on strictly equal terms, is sure to live down and finally live out its inferior. Nothing can save the inferior race but a ready and pliant assimilation. Whether the feebler and more abject races are going to be regenerated and raised up, is already very much of a question. What if it should be God's plan to people the world with better and finer material? Certain it is, whatever expectations we may indulge, that there is a tremendous overbearing surge of power in the Christian nations, which, if the others are not speedily raised to some vastly higher capacity, will inevitably submerge and bury them for ever. These great populations of Christendom—what are they doing but throwing out their colonies on every side, and populating themselves, if I may so speak, into the possession of all countries and climes?"[1] To this result no war of extermination is needful; the contest is not one of arms, but of vitality and of civilization. "At the present day," says Mr. Darwin, "civilized nations are everywhere supplanting barbarous nations, excepting where the climate opposes a deadly barrier; and they succeed mainly, though not exclusively, through their arts, which are the products of the intellect!"[2] Thus the Finns were supplanted by the Aryan races in Europe and Asia, the Tartars by the Russians, and thus the aborigines of North America, Australia and New Zealand are now

[1] "Christian Nurture," pp. 207, 213.
[2] "Descent of Man," Vol. I., p. 154.

disappearing before the all-conquering Anglo-Saxons. It would seem as if these inferior tribes were only precursors of a superior race, voices in the wilderness crying: "Prepare ye the way of the Lord!" The savage is a hunter; by the incoming of civilization the game is driven away and disappears before the hunter becomes a herder or an agriculturalist. The savage is ignorant of many diseases of civilization which, when he is opposed to them, attack him before he learns how to treat them. Civilization also has its vices, of which the uninitiated savage is innocent. He proves an apt learner of vice, but dull enough in the school of morals. Every civilization has its destructive and preservative elements. The Anglo-Saxon race would speedily decay but for the salt of Christianity. Bring savages into contact with our civilization, and its destructive forces become operative at once, while years are necessary to render effective the saving influences of Christian instruction. Moreover, the pioneer wave of our civilization carries with it more scum than salt. Where there is one missionary there are hundreds of miners or traders or adventurers ready to debauch the native. Whether the extinction of inferior races before the advancing Anglo-Saxon seems to the reader sad or otherwise, it certainly appears probable. I know of nothing except climatic conditions to prevent this race from populating Africa as it has peopled North America. And those portions of Africa which are unfavourable to Anglo-Saxon life are less extensive than was once supposed. The Dutch Boers, after two centuries of life there, are as hardy as any race on earth. The Anglo-Saxon has established himself in climates totally diverse—Canada, South Africa and India—and, through

several generations, has preserved his essential race characteristics. He is not, of course, superior to climatic influences; but, even in warm climates, he is likely to retain his aggressive vigor long enough to supplant races already enfeebled. Thus, in what Dr. Bushnell calls "the out-populating power of the Christian stock" may be found God's final and complete solution of the dark problem of heathenism among many inferior peoples.

Some of the stronger races, doubtless, may be able to preserve their integrity; but, in order to compete with the Anglo-Saxon, they will probably be forced to adopt his methods and instruments, his civilization and his religion. Significant movements are now in progress among them. While the Christian religion was never more vital, or its hold upon the Anglo-Saxon mind stronger, there is taking place among the nations a wide-spread intellectual revolt against traditional beliefs. "In every corner of the world," says Mr. Froude,[1] "there is the same phenomenon of the decay of established religions. . . . Among Mohammedans, Jews, Buddhists, Brahmins, traditionary creeds are losing their hold. An intellectual revolution is sweeping over the world, breaking down established opinions, dissolving foundations on which historical faiths have been built up." The contact of Christian with heathen nations is awaking the latter to new life. Old superstitions are loosening their grasp. The dead crust of fossil faiths is being shattered by the movements of life underneath. In Catholic countries, Catholicism is losing its influence over educated minds, and in some cases the masses have already lost all faith in it. Thus, while on this continent God is training the Anglo-Saxon race for its mission, a

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North American Review, December, 1879.

complemental work has been in progress in the great world beyond. God has two hands. Not only is he preparing in our civilization the die with which to stamp the nations, but, by what Southey called the "timing of Providence," he is preparing mankind to receive our impress.

Is there room for reasonable doubt that this race, unless devitalized by alcohol and tobacco, is destined to dispossess many weaker races, assimilate others, and mold the remainder, until, in a very true and important sense, it has Anglo-Saxonized mankind? Already "the English language, saturated with Christian ideas, gathering up into itself the best thought of all the ages, is the great agent of Christian civilization throughout the world; at this moment affecting the destinies and molding the character of half the human race."[1] Jacob Grimm, the German philologist, said of this language: "It seems chosen, like its people, to rule in future times in a still greater degree in all the corners of the earth." He predicted, indeed, that the language of Shakespeare would eventually become the language of mankind. Is not Tennyson's noble prophecy to find its fulfilment in Anglo-Saxondom's extending its dominion and influence—

> "Till the war-drum throbs no longer, and the battle-flags are furl'd
> In the Parliament of man, the Federation of the world."[2]

In my own mind, there is no doubt that the Anglo-Saxon is to exercise the commanding influence in the world's future; but the exact nature of that influence is, as yet, undetermined. How far his civilization will be materialistic and atheistic, and how long it will take thoroughly to Christianize and sweeten it, how rapidly he will hasten the coming of the kingdom wherein dwelleth righteousness, or

[1] Rev. N. G. Clark, D.D. [2] "Locksley Hall."

how many ages he may retard it, is still uncertain; but *it is now being swiftly determined.* Let us weld together in a chain the various links of our logic which we have endeavored to forge. Is it manifest that the Anglo-Saxon holds in his hands the destinies of mankind for ages to come? Is it evident that the United States is to be the home of this race, the principal seat of his power, the great center of his influence? It is true that the great West is to dominate the nation's future. Has it been shown that this generation is to determine the character, and hence the destiny, of the West? Then may God open the eyes of this generation! When Napoleon drew up his troops before the Mamelukes, under the shadow of the Pyramids, pointing to the latter, he said to his soldiers; "Remember that from yonder heights forty centuries look down on you." Men of this generation, from the pyramid top of opportunity on which God has set us, *we look down on forty centuries!* We stretch our hand into the future with power to mold the destinies of unborn millions.

> "We are living, we are dwelling,
> In a grand and awful time,
> In an age on ages telling—
> To be living is sublime!"

Notwithstanding the great perils which threaten it, I cannot think our civilization will perish; but I believe it is fully in the hands of the Christians of the United States, during the next fifteen or twenty years, to hasten or retard the coming of Christ's kingdom in the world by hundreds, and perhaps thousands, of years. We of this generation and nation occupy the Gibraltar of the ages which commands the world's future.

THE GROWTH OF AMERICAN INDUSTRIES AND WEALTH.

BY

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THE GROWTH OF AMERICAN INDUSTRIES AND WEALTH.

THE development of the United States since the year 1850, that is, in a single generation, is unparalleled in the history of nations. The following table shows the rate of increase in ten principal items of national greatness, according to the census returns for each decade and the estimates for 1888:—

	1850	1860	1870	1880	1888	Increase since 1850 (per cent.)
Population ...	100	136	167	218	270	170
Commerce ...	100	214	208	477	415	315
Agriculture ...	100	162	189	293	352	252
Manufactures .	100	186	312	421	508	408
Wealth.....	100	227	369	614	780	680
Steam-power..	100	225	325	527	785	685
Shipping	100	156	151	158	174	74
Railways	100	340	585	1,035	1,680	1,580
Banking	100	190	470	795	1,018	918
Education.....	100	140	164	232	306	206
Total.....	1,000	1,976	2,940	4,770	6,288	529

The smallest increase has been in shipping, all other items having grown much faster than population.

I.—POPULATION AND WORKING POWER.

The census returns for each period enable us to compare not only the population, but the number of persons in various occupations. They omit, however, in the

classification of workers for 1850 and 1860 the able-bodied slaves, male and female, and at all times fail to take cognisance of housekeepers, under which title we should allow one female adult for each house in the Republic. Certainly at least 50 per cent. of the adult slaves in 1850 and 1860 were engaged in agriculture, and the rest may be put down as tradesmen or servants. With this modification upon the census returns we find the total number of workers compares at each decade with population as follows:—

Year.	Number of Workers.	Population.	Workers' Ratio.
1850.....	10,554,000	23,192,000	45 per cent.
1860.....	15,501,000	31,426,000	49 ,,
1870..... ..	19,549,000	38,558,000	51 ,,
1880.....	26,348,000	50,156,000	52 ,,

The increase of population in thirty years was 109 per cent., that of workers 150 per cent. According to the returns for 1880 there were in the Republic 35,200,000 persons born in the country of American parentage, or 70 per cent. of the total, the remainder being composed of settlers and their children, viz.:—

Americans.....	35,200,000
Germans.....	4,878,000
Irish.....	4,526,000
Other nationalities	5,552,000
Total population.....	50,156,000

The total number of foreign settlers was 6,680,000 and of their children 8,276,000, the latter being really Americans to all intents and purposes.

Subject to the modification already noticed, the numbers of persons engaged in various occupations at the several census years were as follow:—

	1850.	1860.	1870.	1880.
Agriculture . .	3,311,000	4,342,000	5,923,000	7,671,000
Manufactures .	958,000	1,311,000	2,054,000	2,733,000
Trades or service	2,923,000	4,878,000	4,529,000	6,988,000
Housekeeping .	3,362,000	4,970,000	7,043,000	8,956,000
	10,554,000	15,501,000	19,549,000	26,348,000

This conveys an idea of the growth of working-power in thirty years, but only an imperfect idea. Let us proceed to measure the collective energy of the nation at the four periods enumerated, in the usual manner, that is, allowing 300 foot tons daily for each adult male, 200 for each adult female, 3000 for each live horse, and 4000 foot-tons daily for each horse-power of steam, viz. :—

	FOOT-TONS, MILLIONS DAILY.			
Year.	Human.	Horse.	Steam.	Total
1850	3,160	12,990	6,440	22,590
1860	4,340	18,760	14,400	37,500
1870	5,420	21,460	20,840	47,720
1880	6,850	31,090	33,740	71,680

The working-power more than trebled in thirty years, which circumstance is sufficient to explain the marvellous growth of industry in that peroid. At present the aggregate energy reaches 90,000 millions of foot-tons daily, having quadrupled since 1850, and exceeding the collective force of the United Kingdom and France combined (see Appendix). No account has been taken of water-power, the value of which cannot be estimated. Suffice it to say that the United States possess 47,000 miles of navigable rivers, which is almost as much as there are in the whole of Europe.

2.—AGRICULTURE.

This has long been the foremost of American industries, occupying more than one-fourth of the adult population (that is, all males and females over 15 and under 60 years), viz. :—

Year.	Agricult. Hands.	Adult Pop.	Agricult. ratio.
1850	3,311,000	12,596,000	26 per cent.
1860	4,342,000	17,301,000	25 ,,
1870	5,923,000	21,561,000	27 ,,
1880	7,671,000	27,306,000	28 ,,

Improved implements and methods of agriculture have at the same time caused labor to be more productive, for whereas the number of hands increased 130 per cent. in thirty years, the grain-crop showed a rise of 211 per cent. If we assume that two-thirds of the agricultural hands were engaged in raising grain, the rest in tending cattle or producing cotton and other commodities, we shall find the production of grain to each person employed was as follows:—

Year.	Grain Crop (Million Bushels).	Hands Employed.	Bushels per Hand.
1850 . .	867	2,207,000	394
1860 . .	1,240	2,894,000	427
1870 . .	1,388	3,948,000	351
1880 . .	2,697	5,114,000	529

The low ratio corresponding to 1870 shows that the country had not yet recovered from the effects of the civil war of 1861-63. The quantity of grain produced in 1880 would suffice to feed 530 millions of people (at 5 bushels per head), or more than ten times what was then the population of the United States. A great portion, however, was used for fattening hogs and other cattle, the annual production of meat having risen from 2,000,000 tons in 1850 to 3,500,000 tons in 1880.

The value of agricultural products nearly trebled in thirty years. In the following table grain is put down at 20 per cent., cotton 17 per cent., below the mean market quotations of each year, the difference being allowed for freight and charges.

	1850 (Millions £).	1860 (Millions £).	1870 (Millions £).	1880 (Millions £).
Wheat . .	22	44	64	101
Maize . .	59	112	98	158
Oats, &c: .	13	16	27	34
Grain . .	94	172	189	293
Meat . .	44	48	66	88
Cotton . .	19	34	43	67
Dairy products.	36	43	54	73
Sundries . .	20	25	32	41
Total .	213	322	384	562

Little more than two-thirds of the agricultural products are consumed in the United States, the value of what is exported having multiplied sevenfold since 1850, and now constituting 30 per cent. of the total, as shown by the Customs returns of exports.

	MILLIONS £ STERLING.			
Year.	Agricult. Products consumed at Home.	Agricult. Products Exported.	Total.	Ratio of Exports.
1850.....	187	26	213	12 per cent.
1860.....	261	61	322	19 ,,
1870.....	301	83	384	22 ,,
1880.....	391	171	562	30 ,,

It would appear, therefore, that about two million persons are engaged in raising food for exportation to British and other markets.

Sometimes European writers have presumed to question whether agriculture was a profitable industry in the United States. This is easily answered, the census returns for 1880 showing the value of farms and stock to be 2973 millions sterling, against 937 millions in 1850; that is an increase of 2036 millions, being an average of 68 millions sterling per annum. The medium number of persons in that interval engaged in all manner of agricultural and pastoral pursuits was 5 millions; hence the

accumulations averaged nearly £14 per head per annum over the whole period of thirty years, a result that has not been met with in any other part of the world.

The ratio of progress in American agriculture has been as follows:—

	1850.	1860.	1870.	1880.
Grain	100	143	160	310
Acreage.....	100	144	168	252
Agricultural values.....	100	198	240	318
Medium.....	100	162	189	293

There has been a much greater rise in the quantity of grain produced, and also in the value of farms and stock, than in the total acreage of improved lands, which shows that the land is turned to more advantage than before, and that farming is carried on more profitably.

3.—MANUFACTURES.

The growth of American manufactures in thirty years was as follows:—

Year.	Value (Millions £).	Hands Employed.	Gross Produce (£ per Hand)
1850	212	958,000	221
1860	392	1,311,000	300
1870	704	2,054,000	343
1880	1,117	2,733,000	409

There is, meantime, something artificial in the increase recorded in this branch of industry, the value put down for 1880 being fully 25 per cent. more than the same merchandise would produce but for the Protective tariff. The fair value of American manufactures in 1880 would not exceed 893 millions sterling.

Among the effects of improved machinery and greater steam power we observe that the ratio of raw material in the gross value of manufactures has risen very remarkably. The census tables show the cost of raw material, the

amount paid for wages, and the capitalists' shares; the last item including not only the net profit but also all working expenses except wages :—

	1850 (Millions £).	1860 (Millions £).	1870 (Millions £).	1880 (Millions £).
Raw material.	115	214	414	706
Wages.....	49	79	129	198
Capitalists' share	48	99	161	213
Total...	212	392	704	1,117

The smallest increase during the period of thirty years was in wages, which rose only 304 per cent., against 514 per cent. in raw material and 344 per cent. in capitalists' share. But it does not follow that operatives are badly paid; on the contrary, they earn much more per head than before.

Year	Wages (Millions £)	Number of Operatives.	Wages per Head.
1850.....	49	958,000	51
1860.....	79	1,311,000	60
1870.....	129	2,054,000	63
1880.....	198	2,733,000	72

The average wages in 1880 were 42 per cent. higher than in 1850. The cost of living, meantime, had risen considerably, which counterbalanced in some measure the higher rate of wages.

The following table shows the principal manufactures in each census year :—

	1850 (Millions £).	1860 (Millions £).	1870 (Millions £).	1880 (Millions £).
Iron and machinery.....	16	25	83	115
Flour	28	47	74	105
Leather and boots.....	19	34	56	83
Cotton and woollen goods	22	39	54	77
Clothing.....	10	14	27	50
Lumber	12	20	42	49
Sundries.....	105	213	368	638
Total.....	212	392	704	1,117

The apparent value in 1880, as I have already observed, was in a manner fictitious, say 25 per cent. over the real value, which was 893 millions sterling. Manufacturing industry may therefore be said to have increased 321 per cent. in thirty years, or twice as fast as population.

4.—COMMERCE, SHIPPING AND OTHER ITEMS.

The growth of foreign trade has been considerable, but the amount per inhabitant is still very low. The following table includes imports and exports of merchandise, but not bullion :—

Year	Millions Sterling.
1850	65
1860	139
1870	135
1880	310
1886	270

The ratio is less than £5 per inhabitant, against £19 in Great Britain and £40 in Australia.

There is little room to doubt that commercial progress would have been greater but for the relative decline of shipping, the result of unwise Protective legislation. In 1850 American shipping exceeded that of the United Kingdom both in nominal tonnage and carrying power. At present the British merchant navy (not including colonial) has more than double the carrying power of the American.

	TONNAGE, NOMINAL.		CARRYING-POWER, TONS.	
Year.	United States.	British.	United States.	British.
1850	3,535,000	3,137,000	5,640,000	3,955,000
1860	5,354,000	4,360,000	8,826,000	5,950,000
1870	4,247,000	5,691,000	8,550,000	10,090,000
1880	4,068,000	6,345,000	8,916,000	16,720,000
1886	4,131,000	7,210,000	9,820,000	22,770,000

In thirty-six years the American carrying-power has not quite doubled, while that of Great Britain has grown

six-fold. Seeing the wonderful development of American industry in every other direction, we are forced to conclude that shipping would have progressed in like manner if allowed fair play.

In connection with trade we have to survey the growth of railways, of which the United States now possess more than 150,000 miles, viz. :—

Year.	Miles.	Cost (Millions £).	£ per nhabitant.
1850	9,020	60	3
1860	30,593	225	7
1870	52,974	480	12
1880	93,671	1,041	21
1888	151,200	1,540	25

The construction of new lines since 1880 has exceeded 20 miles a day.

The business of banking has multiplied tenfold since 1850, viz. —

Year.	Capital (Millions £).	Deposits (Millions £).	Total (Millions £).
1850	47	27	74
1860	88	53	141
1883	150	604	754

The aggregate ratio of capital and deposits is now £12 per inhabitant, against £3 in 1850.

It may be well to advert here likewise to the advance of education, which may be measured by the number of children attending school, viz. :—

Year.	Children.	Ratio to Population.
1850	4,090,000	17 per cent.
1860	5,693,000	18 ,,
1870	6,596,000	17 ,,
1880	9,424,000	19 ,,
1885	11,170,000	20 ,,

Still more notable is the increase of newspaper circulation. The daily papers alone (without weeklies, &c.) issued the following number of copies :—

Year.	Millions.	Per Inhabitant.
1850	235	10
1860	459	15
1870	806	21
1880	1,126	22

Thus, while the number of school-children rose 180 per cent. in thirty-five years, newspaper circulation increased 400 per cent. in a shorter period, namely from 1850 to 1880.

5.—WEALTH.

According to the census returns the increase of wealth in thirty years ending 1880 was 514 per cent., equal to 4½ times the growth of population. The principal items were:—

	1850 (Millions £).	1860 (Millions £).	1870 (Millions £).	1880 (Millions £)
Farms and stock	937	1,845	2241	2,973
Railways	60	225	480	1,041
Factories	108	210	298	580
Sundries	379	1,081	1,984	4,483
Total	1,484	3,361	5,003	9,077

The item of sundries for 1880 includes approximately 2,200 millions for house property, 880 millions for public works, and 1,403 millions for furniture, merchandise, bullion, shipping, canals, telegraphs, &c.

The total increase in thirty years was 7,593 millions sterling, made up thus:—

	Millions £.
In farms	2,036
,, railways	981
,, factories	472
,, houses, &c.	4,104

The annual accumulation of wealth averaged 253 millions sterling, being about 50 per cent. over the accumulations of Great Britain or France.

It is a remarkable coincidence that the increase of

agricultural wealth, during the period of thirty years alluded to, formed 26½ per cent. of the total accumulation, and that the number of persons engaged in agricultural pursuits from 1850 to 1880 averaged 26½ per cent. of the total number of workers in the Republic, as already shown. Thus it would appear that agriculture has been neither more nor less profitable than the average industries of the Republic. The medium number of workers of all descriptions in the United States between 1850 and 1880 was 18 millions, and their accumulations averaged £14 per head yearly.

If we suppose that each inhabitant contributed equally to swell the public wealth of the State in which he lived, we find that 82 per cent. of the accumulation in thirty years was produced by Americans, 6 per cent. by Irish settlers, 5 per cent. by Germans, and 7 per cent. by other nationalities, viz. :—

States.	Increase of Wealth, Millions £ sterling. Americans.	Irish.	Germans.	Total Increase.
New York	1 027	156	87	1,360
Pennsylvania	831	63	41	972
Illinois	494	27	47	611
Ohio	506	17	38	581
Massachusetts	355	66	4	462
California	195	23	14	293
Other States	2,822	119	143	3,314
Total	6,230	471	374	7,593

The rate of accumulation, whether compared with the number of workers or with the total population, has been rising rapidly in late years, as the following table shows:—

Decade ending	Accumulation (Millions £).	£ per Inhabitant per Annum.	£ per Worker per Annum.
1860	1,877	7·0	14·5
1870	1,642	4·7	9·4
1880	4,074	9·2	17·7

The falling-off in the decade ending 1870 was due to the civil war of 1861–63. If the increase had been at the same rate as in the preceding decade, that is, £7 per inhabitant it would have reached 830 millions more than it did.

Closely connected with the increase of wealth is the question of national earnings, which have more than trebled since 1850. The subjoined table shows the value of agricultural products in each census year, that of manufactures after deducting raw material, the earnings of transport service (estimated at 10 per cent. on all agricultural and manufacturing merchandise, besides £1 sterling per inhabitant), the earnings of retail trade (say 15 per cent. on the merchandise above mentioned), the item of house-rent estimated at 6 per cent. on the supposed value of house property, the profits of foreign trade (being 10 per cent. on same), and an allowance of 3 per cent. of total earnings for the support of the learned professions (which in 1880 would have given them £100 each), including clergymen, lawyers, physicians, dentists, musicians, and teachers, viz. :—

Earnings of the American People in Millions £.

	1850	1860	1870	1880
Agriculture	213	322	384	562
Manufactures (net)	97	178	290	411
Transport	66	102	148	218
Retail trade	64	107	164	252
Foreign trade	7	14	14	31
House rent	23	53	88	132
Professions	14	24	33	48
Total	484	800	1,121	1,654

Compared with population the earnings showed an average of £21 per inhabitant in 1850, and £33 in 1880. The total earnings for thirty years show an aggregate of

29,900 millions sterling, and the accumulation of wealth has been already shown to be 7,593 millions, or a little over one-fourth of earnings. The ratio of savings has been, however, by no means uniform, viz. :—

Decade ending	Earnings (Millions £).	Savings (Millions £).	Ratio.
1860	6,420	1,877	29 per cent.
1870	9,600	1,642	17 ,,
1880	13,900	4,074	30 ,,
Total	29,900	7,593	25 ,,

It may be laid down as a self-evident proposition that a nation which can afford to lay by 30 per cent. of its earnings is in the enjoyment of affluence. This has been the ordinary rate of accumulation in the United States, the decade ending 1870 having been exceptional on account of the civil war of 1861–63.

At present the increase of industry, energy, and wealth goes on unabated. The next census, in 1890, will probably show a population of 66 millions, with an aggregate energy of almost 100,000 millions of foot-tons daily, and an accumulated wealth of 14,000 millions sterling, figures never before applicable to any nation in the world.

APPENDIX.

Aggregate Energy of Principal Nations in Millions of Foot-tons daily.

Countries.	Hand.	Horse.	Steam.	Total.
United States ...	8,454	33,600	48,400	89,454
United Kingdom	5,290	8,700	38,960	52,950
France	5,690	8,500	16,150	30,340
Germany	6,930	10,500	19,800	37,230

Horse-power of Steam used in the United States.

	1850.	1860.	1870.	1880.	1888.
Railways...	720,000	2,150,000	3,180,000	5,345,000	8,400,000
Steamers...	390,000	650,000	810,000	905,000	1,200,000
Factories and mines	500,000	800,000	1,216,000	2,185,000	2,500,000
Total	1,610,000	3,600,000	5,206,000	8,435,000	12,100,000

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